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Name of Depositor: Daryl K. Neff

Signature 

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

In re application of:  
**Michael C. Gaidis et al.**

Date: **December 5, 2006**

Serial Number: **10/709,999**

Examiner: **Dung Anh Le**

Filed: **June 11, 2004**

Group Art Unit: **2818**

**Conf. #3998**

Title: **METHOD OF PATTERNING A  
MAGNETIC TUNNEL JUNCTION STACK  
FOR A MAGNETO-RESISTIVE RANDOM  
ACCESS MEMORY**

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**PRE-APPEAL BRIEF REQUEST FOR REVIEW**

MS AF  
Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Sir:

Applicants request review of the final rejection in the above-identified application. No amendments are being filed with this request. This request is filed following the final Office Action dated September 5, 2006.

This request is being filed with a Notice of Appeal.

The review is requested for the reasons stated in the following sheets attached below as Arguments. As required, no more than five (5) pages are provided.

ARGUMENTS

This request is in response to the final Office Action dated September 5, 2006.

Claims 1-4, 8-12, 16-17 and 21-27 are pending in the application. In the final Office Action, dated September 5, 2006, all claims were rejected under 35 U.S.C. §103(a) as being obvious over various combinations of U.S. Patent Publication 2005/0020076A1 to Lee et al. ("*Lee*"), US Patent Publication 2004/0259274 to Park et al. ("*Park*"), and US Patent Publication 2004/0043526A1 to Ying et al. ("*Ying*"). Claims 1-2, 10, and 12-15 were rejected over *Lee* in view of *Park*; claims 1, 3-12, 17, 21-22 were rejected over *Ying* in view of *Park* and claims 23-27 were rejected over *Lee* in view of *Park*. For the reasons set forth below, applicants respectfully submit that the presently pending claims are fully distinguished from *Park*, *Lee* and *Ying*. Reconsideration and withdrawal of the rejections is respectfully requested in view of the remarks presented herein.

Applicants respectfully submit that *Park* is not properly combinable with *Lee* and *Ying* to reject the claims of the application. The conductive hard mask 126 described in *Park* at paragraph [0024] is used to *pattern* the soft layer 124 using a reactive ion etch. Clearly, the method recited in the pending claims avoids patterning or removing the "soft" or free layer, instead rendering the free layer inactive (claim 1), e.g. by chemically altering its composition (claim 3) or by plasma treatment (claim 4) among others.

Moreover, the Examiner's position with respect to claims 9, 11 and 16 is not supported by the passages of the references cited in the final Office Action.

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Paragraph [0029] of *Ying* makes no mention of exposing the free layer to fluorine or carbon (claim 9), use of a donor film to supply an agent by diffusion (claim 16), or use of anodization (claim 11).

Withdrawal of the present rejections and allowance of the application are respectfully requested.

The accompanying Notice of Appeal is filed with the required fee. It is believed that no other fee is due with this request for review. I am an attorney acting under 37 CFR 1.34.

Respectfully submitted,  
**Michael C. Gaidis et al.**

By: \_\_\_\_\_

  
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